

Data Table for Four Corners Area Electric Generating Units [DRAFT V.10]
Prepared by 4C Power Plant Facility(EGU) Data Table Team [edit September 9, 2006]

Facility	Operator	Fuel Source	EPA Programs / Region [4, 10]	Regulator	Location / (Lat, Long) [4]	MW	Present Control Technologies	Monitoring Activities (CEMs)	Emission Inventory Data	EPA Acid Rain Program Data and Maps [4]	Planned Facility Upgrades	Coal Source Info	Greenhouse Gas Info (CO ₂)	ICR Data	BART Eligible ?	Estimated Emissions after upgrades 2010
San Juan Generating Station [1]	PNM Resources (Owner/Operator)	Coal	ARP, EPA 9, Western Systems Coordinating Council	NMED - AQB	(36.8006, 108.4386) [4], 15 miles NW of Farmington (San Juan County)	4 units, 1798 MW	PM- ESP	PM – COMs	PM – 673 tons (2005)		PM – baghouse	San Juan Mine	13,097,406 tons (2005)		Yes – all four units	PM - 670 tons/yr
							SO _x - Wet Limestone	SO _x – CEMs	SO ₂ – 16,570 tons (2005)	SO ₂ – 16,179.3 tons (2004), 16,569.5 tons (2005) [4]	SO ₂ – enhanced scrubbing					SO ₂ -8,900 tons/yr
							NO _x – Low-NO _x burners / Over-fired air	NO _x – CEMs	NO _x – 26,809 tons (2005)	NO _x – 26,880.2 tons (2004), 26,809.0 tons (2005) [4]	NO _x – low-NO _x burners/ over-fired air / neutral					NO _x - 18,500 tons/yr
							Hg – Wet scrubber	Hg - none	Hg – 766 lbs (2005)	CO ₂ – 13,147,181.0 tons (2004), 13,097,410.1 tons	Hg – activated carbon. Hg -					Hg - 275 lbs/yr
Four Corners Power Plant [2,3]	Arizona Public Service Company (Owner/Operator)	Coal	ARP, EPA 9	EPA Region 9, Navajo Nation EPA	(36.69, 108.4814) [4], Navajo Indian Reservation 15 miles west of Farmington (San Juan County)	5 units, 2040 MW	Units #1 - #3:	PM – COMs, Stack testing	PM – 1,187 tons (2000-2005 annual average)		Considering available technologies for future regulatory changes [3]	BHP Navajo mine	15,913,105 tons (2000-2005 annual average)		Yes – all five units (?)	
							PM - Wet venturi scrubbers	SO _x – CEMs	SO ₂ – 12,500 tons (2005)	SO ₂ – 18,771 tons (2004), 12,554.2 (2005) [4]						
							SO _x - Dolomitic lime wet scrubbing	NO _x – CEMs	NO _x – 42,000 tons (2000-2005 annual average)	NO _x – 40,742 tons (2004), 41,743.4 tons (2005) [4]						
							NO _x – Low-NO _x burners	Hg - none	Hg – Approx. 550-600 lbs/yr	CO ₂ – 15,106,255 tons (2004), 16,015,408.7 tons (2005) [4]						
							Hg – Venturi scrubber									
							Units #4 & #5:									
							PM – Baghouses									
							SO _x – Lime slurry wet scrubbing									
Proposed Desert Rock Energy Facility [5, 12]		Coal		EPA Region 9, Navajo Nation EPA	30 miles Southwest of Farmington (San Juan County) [5]	2 units, 1500 MW [5]	PM – Baghouse [6, 12] ¹	PM – COMs	PM (TSP/PM) – 570 Tons/yr [6,12] ³		Hg – activated carbon if control < 90% and cost < \$13,000/lb**	BHP Navajo mine [5]	Approx. 11,000,000 tons/yr[8]		No	
									PM ₁₀ – 1,120 Tons/yr [6, 12] ⁴							
							SO _x –Wet Limestone FGD [6, 12] ¹	SO _x – CEMs	SO ₂ – 3,319 Tons/yr [6, 12]							
							NO _x – low-NO _x burners/ over-fired air	NO _x – CEMs	NO _x – 3,325 Tons/yr [6, 12]							
							Hg – SCR +baghouse +FGD ² [6, 12]		Mercury – 114 lbs/ yr [12]							
									CO – 5,529 Tons/yr [12]							
									Lead – 11.1 Tons/yr [12]							
							Hydrated Lime Injection & Wet Hydrated Lime Injection & Wet		Flourides – 13.3 Tons/yr [12]							
Bluffview Power Plant [4]	City of Farmington (Owner/Operator) (Started 28 JUL-05)	Pipeline Natural Gas / Cogeneration	ARP, EPA 6		(36.7164, -108.2153) Farmington, NM (San Juan County) [4]	60 MW (annual report)							145997.3 tons (2005) [4]			
										SO ₂ – 0.7 tons/yr (2005) [4]						
							Dry Low NO _x Burners, Selective Catalytic Reduction			NO _x – 58.5 tons/yr (2005) [4]						
Milagro [4]	Williams Field Services (Owner/Operator)	Pipeline Natural Gas / Cogeneration	ARP, EPA 6		(36.7367, -107.9417) Bloomfield, NM (San Juan County) [4]	2 units, 61 MW [11]				SO ₂ – 2.6 tons (2004), 2.5 tons (2005) [4]			498823.3 tons (2005) [4]			
										NO _x – 97.6 tons (2004), 110.2 tons (2005) [4]						
							NO _x – Dry Low-NO _x burners			CO ₂ - 506943.9 tons (2004), 498823.3 tons (2005) [4]						

Animas Power Plant [9]	City of Farmington (Owner/Operator)	Pipeline Natural Gas / Cogener	EPA 6, Western Systems Coordinating Council		(36.51, -108.33) (San Juan County) [10]	50.780 MW [9]											
Bloomfield Generation [4]	Ameramex Energy Group, Inc. (Owner/Operator)		ARP, EPA 6		(36.5085, -108.3206) (San Juan County) [10]												
Navajo Dam Hydro Plant [9]	City of Farmington (Owner/Operator)	Water			Navajo Dam, NM (San Juan County)	30 MW [9]											
Mustang Energy Project[7] ⁵		Coal			Grants	300 MW	PM - SO _x - NO _x - Hg -		PM - 185 tons/yr SO ₂ – 250 tons/yr NO _x - 125 tons/yr				Peabody Lee Ranch Mine	Approx. 2,000,000 tons/yr[8]			

(1) May 23, 2006 edit, info provided by Mike Farley (PNM), and in SJGS presentation for 4CAQTF, "SJGS Emissions Control Current and Future

(2) http://www.aps.com/general_info/AboutAPS_18.html [dl 5/29/06]

(3) APS Four Corners Power Plant tour handout (received 5/10/06), and supplemental info provided by Richard Grimes (APS), in May 31 table ed

(4) EPA Clean Air Markets – Data and Maps Query (2004 2005 2006 Facility & Unit Emissions Reports

(5) SITHE GLOBAL Desert Rock Energy Project FACT SHEET #1 DEC 2004 [dl 5/29/06]

(6) Application for Prevention of Significant Deterioration Permit for the Desert Rock Energy Facility, prepared by ENSR International May 200

(7) Reference to Dave R. edits 6/2/06

(8) Assumption based on San Juan Generating Station CO₂ rationing by MW, approx. 7,300 tons/MW assumption

(9) Farmington Electric Utility Fact Sheet http://206.206.77.3/pdf/electric_utility/feus_fact_sheet.pdf (6/16/06

(10) Info provided by Mike Farley (PNM)

(11) http://www.emnrd.state.nm.us/EMNRD/MAIN/documents/SER1_electricity.pdf

(12) AMBIENT AIR QUALITY IMPACT REPORT (NSR 4-1-3, AZP 04-01), Table 1, EPA Region 9 Air Programs: <http://www.epa.gov/region09/air/permit/desertrock/#per>

¹Subject to BACT - Best available control technology [6]

²Mercury (Hg) and HCL have been targeted under future regulation under maximum available control technology (MACT) [6]

³PM is defined as filterable particulate matter as measured by EPA Method 5.

⁴PM₁₀ is defined as solid particulate matter smaller than 10 micrometers diameter as measured by EPA Method 201 or 201A plus condensable particulate matter as measured by EPA Method 202. EPA is treating PM₁₀ as a surrogate for PM_{2.5}.

⁵Outside of Scope of Work, Not located in 4CAQTF study area

Acronyms

EGU - Electric Generating Uni

MW - Megawatt

PM - Particulate Matter

SO_x - Sulfur Oxides

NO_x - Nitrogen Oxides

SO₂ - Sulfur Dioxide

ESP - Electrostatic Precipitator

Hg - Mercury

COM - Continuous Opacity Monitor

CEM - Continuous Emissions Monitor

HAP - Hazardous Air Pollutan

BHP - BHP Billiton

FGD - Flue Gas Desulfurization

BACT - Best Aavailable Control Technology

MACT - Maximum Available Control Technolog